captured large insects, including beetles (primarily scarabaeid, curculionid and cerambycid), grasshoppers (Orthopetra; Acrididae), and cockroaches (Orthoptera; Blattidae). There was little overlap in the vertebrate component of the diets of the two species: Black-and-white Owls fed on bats (especially *Artibeus jamaicensis*), while Mottled Owls ate small rodents (including *Oryzomys fulvescens* and *Sigmodon hispidus*). Quantitative analysis of food habits was based on frequency of occurrence of prey taxa in pellets. One hundred percent of Black-and-white Owl pellets contained insect exoskeletal material; 73% contained bat fur and/or bones. Ninety-eight percent of Mottled Owl pellets contained insect matter, while 56% contained vertebrate remains.

BREEDING AND WINTERING RANGES OF SHARP-SHINNED HAWKS (*ACCIPITER STRIATUS*) MIGRATING THROUGH THE CENTRAL APPALACHIANS OF NORTHEASTERN UNITED STATES: CONSERVATION IMPLICATIONS

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Hawk watches at coastal locations in eastern North America have reported precipitous declines in counts of Sharp-shinned Hawks (*Accipiter striatus*) in recent years. However, nearby Appalachian sites have only recently noted a decline. To interpret hawk count trend comparisons, we first need to determine the origin of the birds being sampled at each site. To ascertain if the birds migrating through the Appalachians originate from the same populations as those sighted along the east coast, we examined band recovery data on all Sharp-shinned Hawks banded prior to 1990 in the eastern Appalachians ($N = 212$) and compared it to that reported for Cape May, New Jersey. Band recovery data suggest that the breeding and wintering ranges of Sharped-shinned Hawks that migrate through the Appalachian flyway overlap extensively with those reported for birds banded on the coastal flyway. In contrast to central and western populations, eastern Sharp-shinned Hawks were found to winter predominately within the United States. We found no difference in wintering range among age and sex classes of Appalachian birds. Because immature birds comprise most of the coastal observations, and band recovery data suggest coastal birds and Appalachian birds originate from similar populations, we propose that recent declines reflect on inhibition of reproduction over a wide region of the northeast rather than a localized decline.

MORPHOLOGICAL DIFFERENCES OF FERRUGINOUS HAWKS (*BUTEO REGALIS*) EAST AND WEST OF THE ROCKY MOUNTAINS

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In 1991, the U.S. Fish and Wildlife Service (USFWS) received a petition to list the Ferruginous Hawk (*Buteo regalis*) as threatened or endangered under the Endangered Species Act. Status reviews have found that the overall population has increased in recent years. However, most of this increase has occurred in populations east of the Rocky Mountains, and some western populations may still be suffering declines. To determine if morphological and genetic differences exist between what have been speculated to be separate subpopulations, 70 adult Ferruginous Hawks were trapped at nesting areas east and west of the Rocky Mountains in 1991 and 1992. Initial analysis using multivariate analysis of variance and Duncan's multiple-range test indicates a significant morphological difference between areas (females: $P < 0.0001$, males: $P < 0.0035$, with a Bonferroni corrected significance level). Eastern populations were heavier than western populations (female mass means = 1871 g vs. 1680 g, male mass means = 1239 g vs. 1098 g, respectively). Other character means that were significantly different included third toe length, bill chord, horizontal bill, and gape width. Additional results will be discussed.

SELECTION OF PREY AND FORAGING METHODS IN BREEDING AMERICAN KESTRELS

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The foraging theory predicts that the use of food and choice of foraging method by an animal are influenced by the pattern of abundance, nutritional value, and cost of capture of prey potentially available. I studied the American Kestrel's use of prey by determining presence or absence of prey items in a total of 685 pellets collected weekly from 26 breeding birds in 1991. I found four principal prey groups: insects, mammals, birds, and snakes. When insects were scarce, a higher proportion of mammals appeared in the pellets and vice versa. The presence of birds in the diet correlated with the abundance of fledglings. Finally, snakes were represented only from mid-May until early August. Results of my first year's study gave insight on the use of prey. However, some questions arose, such as: did kestrels use the most available prey?, was the choice of prey influenced by its abundance?, and finally, what foraging methods were used? I recorded hunting method, hunting success, and prey item from 22 breeding birds daily in the mornings at intervals of 30 seconds in sessions of 5–300 minutes in 1992. I also sampled three major prey populations: beetles, grasshoppers, and mice, to obtain their relative abundance throughout the seasons. The data suggest that kestrels made optimal selection of prey and foraging method. They selected the most rewarding item dependent on prey density, but whenever two prey types were abundant they switched to the one of better quality. Kestrels used perch hunting when trying for insects, and hovering and flight hunting while attempting to catch